

LPDES PERMIT NO. LA0059030, AI No. 19588

LPDES FACTSHEET

**FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

1. **Company/Facility Name:** Entergy Gulf States, Inc.
Roy S. Nelson Plant (Coal Unit 6)
3500 Houston River Road
Westlake, Louisiana 70669

2. **Issuing Office:** Louisiana Department of Environmental Quality
(LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

3. **Prepared By:** Michelle Bickham
Permits Division

- Date Prepared:** April 12, 2007

4. **Permit Action/Status:**
 - A. **Reason For Permit Action:**

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711.

LAC33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

 - B. **LWDPS permit - (WP1507)**
LWDPS permit effective date: July 16, 1987
LWDPS permit expiration date: July 15, 1992

 - C. **LPDES permit - (LA0059030)**
LPDES permit effective date: January 1, 2002
LPDES permit expiration date: December 31, 2006

 - E. **Application received on June 27, 2006**

5. **Facility Information:**
 - A. **Location -** 3500 Houston River Road, Westlake, Calcasieu Parish

 - B. **Applicant Activity -**

Entergy Gulf States, Inc., Roy S. Nelson Plant (Coal Unit 6), is an existing steam electric generating plant. The coal-fired boiler feeds a steam turbine and generator that operates at a

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minimum load of 240 megawatts and a maximum generating capacity of 550 megawatts. The plant burns western coal as well as commingling percentages of lignite and other coals. Coal and lignite are delivered to the site by railcar or truck. The site has supporting maintenance, storage, and power transmission facilities.

The Entergy Gulf States, Inc., Roy S. Nelson Plant is an existing electric generating facility that operates a cooling water intake structure on the Sabine River Authority Canal. The intake structure has a design capacity of approximately 1.87 MGD. In preparing the renewal LPDES permit for the Roy S. Nelson Plant, this Office determined that in accordance with 40 CFR125.91(a) and LAC 33:IX.4733, the facility is not regulated by the 316(b) Phase I or Phase II rule for cooling water intake structures because it is an existing facility that has a design intake capacity of less than 50 MGD.

C. Technology Basis - LAC 33:IX.4903

Guideline

Steam Electric Power Generating
Point Source Category

Reference

40 CFR 423

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

LPDES permit LAG670000 effective February 1, 2003

LPDES permit LAG480000 effective August 1, 2001

Best Professional Judgement

D. Fee Rate -

1. Fee Rating Facility Type: Major
2. Complexity Type: IV
3. Wastewater Type: III
4. SIC code: 4911

E. Estimated Facility Effluent Flow (Max 30-Day) - 8.4619 mgd

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6. Receiving Waters: Houston River

1. TSS (15%), mg/L: 7.17 mg/L
2. Average Hardness, mg/L CaCO₃: 18.85 mg/L
3. Critical Flow, cfs: 9.38
4. Mixing Zone Fraction: 1
5. Harmonic Mean Flow, cfs: 9.38
6. River Basin: Calcasieu River, Segment No. 030806
7. Designated Uses:
The designated uses are primary contact recreation,
secondary contact recreation, fish and wildlife propagation,
and agriculture.

Information based on the following: Water Quality Management Plan, Volume 5A, 1994; LAC 33:IX Chapter 11; Recommendation(s) from the Engineering Section. Hardness and 15% TSS data come from monitoring station on the Houston River at a bridge on State Highway 27 near Buhler. Based on previous determinations, the 7Q10 would be 9.38 CFS. The harmonic mean flow has been set at 9.38 CFS also, as a result of the relatively continuous flows to Houston River, from upstream flows, ground water contribution, and tidal effect.

7. Outfall Information:Outfall 001

- A. Type of wastewater - treated sanitary wastewater from the sewage package treatment plant that services the administration building, control room building, and heavy equipment maintenance building restrooms
- B. Location - at the point of discharge from the sewage treatment plant prior to entering local drainage thence to the Houston River (Latitude 30°17'09", Longitude 93°17'31")
- C. Treatment - sewage treatment plant including activated sludge, sedimentation, and chlorination
- D. Flow - 0.0125 mgd
- E. Receiving waters - local drainage thence to the Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

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Outfall 002

- A. Type of wastewater - cooling tower blowdown from the circular, induced draft cooling tower that services Unit 6
- B. Location - at the point of discharge from the cooling tower blowdown line prior to entering local drainage thence to the Houston River (Latitude 30°17'13", Longitude 93°17'31")
- C. Treatment - none
- D. Flow - 1.122 MGD
- E. Receiving waters - local drainage thence to the Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

Outfall 003

- A. Type of wastewater - coal pile runoff, ash disposal area runoff, coal handling area runoff, cooling tower blowdown (intermittent), maintenance wastewater, low volume wastewaters (including but not limited to plant drains, bottom ash handling system wastewater, reverse osmosis reject water, demineralizer regeneration wastewater), previously monitored treated sanitary wastewater from Outfall 203, and hydrostatic test wastewater from Outfall 303
- B. Location - at the point of discharge from the settling pond prior to entering local drainage thence to the Houston River (Latitude 30°17'18", Longitude 93°17'05")
- C. Treatment - sedimentation, neutralization, and filtration
- D. Flow - 7.33 MGD
- E. Receiving waters - local drainage thence to Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

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Outfall 203

- A. Type of wastewater - treated sanitary wastewater from the fly ash maintenance building restroom
- B. Location - at the point of discharge from the sewage treatment plant prior to entering the settling pond (Latitude 30°17'00", Longitude 93°17'45")
- C. Treatment - sewage treatment plant including activated sludge, sedimentation, and chlorination
- D. Flow - 0.0005 MGD
- E. Receiving waters - settling pond thence through Outfall 003 thence to local drainage thence to the Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

Outfall 303

- A. Type of wastewater - hydrostatic test wastewater from hydrostatic tests conducted on various pipes, tanks, vessels, and/or equipment
- B. Location - at the point of discharge from the pipe, tank, vessel, and/or equipment being tested prior to entering the settling pond (Latitude 30°17'18", Longitude 93°17'05")
- C. Treatment - sedimentation, neutralization, and filtration
- D. Flow - intermittent
- E. Receiving waters - settling pond thence through Outfall 003 or Outfall 004 thence to local drainage thence to the Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

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Outfall 004

- A. Type of wastewater - stormwater runoff from the Unit 6 turbine building area, force draft fan area, and bowl mill area, non process maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system test water, and landscape water), and previously monitored hydrostatic wastewater from Outfall 303
- B. Location - at the point of discharge from the pipe located on the eastern edge of Unit 6 prior to entering local drainage thence to the Houston River (Latitude 30°17'18", Longitude 93°17'05")
- C. Treatment - none
- D. Flow - intermittent
- E. Receiving waters - local drainage thence to Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

Outfall 005

- A. Type of wastewater - clarifier underflow
- B. Location - at the point of discharge from the underflow from the raw river water intake clarifier (Latitude 30°17'18", Longitude 93°17'05")
- C. Treatment - neutralization, chemical oxidation, chemical precipitation, and sedimentation
- D. Flow - intermittent
- E. Receiving waters - local drainage thence to the Houston River
- F. Basin and segment - Calcasieu River Basin, Segment 030806

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8. Previous Effluent Limitations

Outfall 001 - treated sanitary wastewater from the administration building, control room building, and heavy equipment maintenance building restrooms

Parameter	LPDES	
	Monthly Average	Weekly Maximum
Flow - mgd	Report 1/12 mos Est.	Report 1/12 mos Est.
BOD	---	45 mg/L 1/12 mos Grab
TSS	---	45 mg/L 1/12 mos Grab
Fecal Coliform	---	400 col/100 mL 1/12 mos Grab
pH	6 - 9 s.u. 1/12 mos Grab	

There shall be no discharge of floating solids or visible foam in other than trace amounts, nor of free oil or other oil materials, nor of toxic materials in quantities such as to cause acute toxicity to aquatic organisms. Furthermore, there shall be no visible sheen or stains attributable to this discharge.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 001, at the point of discharge from the aerobic package plant prior to entering a plant drainage ditch then to the Houston River

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Outfall 002 - cooling tower blowdown

Parameter	LPDES	
	Monthly Average	Daily Maximum
Flow - mgd	Report 1/week Est.	Report 1/week Est.
Temperature	---	97°F 1/day Grab
Free Available Chlorine	0.23 lbs/day 0.2 mg/L 1/week Grab	0.57 lbs/day 0.5 mg/L 1/week Grab
Total Chromium	2.74 lbs/day 0.2 mg/L 1/year Grab	2.74 lbs/day 0.2 mg/L 1/year Grab
Total Zinc	13.67 lbs/day 1.0 mg/L 1/quarter Grab	13.67 lbs/day 1.0 mg/L 1/quarter Grab
pH	6 - 9 s.u. 1/week Grab	

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations (s):

Outfall 002, at the point of discharge from the cooling tower blowdown line prior to entering a plant drainage ditch then to the Houston River.

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Outfall 003 - coal pile runoff, ash disposal area runoff, low volume wastewaters as defined by 40 CFR 423 including wastewaters treated by an oil/water separator, electrostatic precipitator rinse water, maintenance wastewaters, plant drainage, vehicle rinse water, and previously monitored treated sanitary wastewater, and an optional discharge of cooling tower blowdown

Parameter	LPDES	
	Monthly Average	Weekly Maximum
Flow - mgd	Report Continuous Recorder	Report Continuous Recorder
TSS	Report 1/week Grab	50 mg/L 1/week Grab
TOC	---	50 mg/L 1/month Grab
Oil and Grease	15 mg/L 1/month Grab	20 mg/L 1/month Grab
pH	6 - 9 s.u. 1/week Grab	

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Outfall 003, at the point of discharge from the settling pond prior to entering a plant drainage ditch then to the Houston River.

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Outfall 103 - treated sanitary wastewater from the railroad coal car handling facility restroom

Outfall 203 - treated sanitary wastewater from the fly ash maintenance building restroom

Parameter	LPDES	
	Monthly Average	Weekly Maximum
Flow - mgd	---	Report 1/12 mos Est.
BOD	---	45 mg/L 1/12 mos Grab
TSS	---	45 mg/L 1/12 mos Grab
Fecal Coliform	---	400 col/100 mL 1/12 mos Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

Internal Outfall 103, at the point of discharge from the aerobic package plant prior to entering the settling pond thence to Outfall 003.

Internal Outfall 203, at the point of discharge from the aerobic package plant prior to entering the settling pond thence to Outfall 003.

9. Summary of Proposed Permit Changes

This permit has been deemed a major facility based on the NPDES Permit Rating Work Sheet with a score of 85.

Outfalls 001

- The limitations and frequency for sampling for all parameters has been changed (to Class II General Sanitary permit) as a result of an increase in flow.

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Outfall 103

- This outfall has been removed from the permit as it now discharges to a subsurface drainage pipe system

Outfall 203

- The frequency for sampling for all parameters has been changed to 1/6 months.

Outfall 002

- Biomonitoring requirements have been added to this outfall.

Outfall 303

- This outfall was added for the discharge of hydrostatic test wastewater.

Outfall 004

- This outfall was added for the discharge of stormwater runoff, non process maintenance water and previously monitored hydrostatic test wastewater.

Outfall 005

- This outfall was added for the discharge of clarifier underflow wastewater.

10. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

11. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

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A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b, the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D, whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. The permittee is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

<u>Manufacturing Operation</u>	<u>Guideline</u>
Steam Electric Power Generating Point Source Category	40 CFR 423

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715] and to assure compliance with permit limitations [LAC 33:IX.2707.I].

C. MONITORING FREQUENCIES

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity (LAC33:IX.2715) and to assure compliance with permit limitations (LAC33:IX.2707.I). Specific monitoring frequencies per outfall are listed in Section D.

D. OUTFALL SPECIFIC RATIONALES

Outfall 001

1. General Comments

The intermittent discharge of treated sanitary wastewater from the sewage package treatment plant that services the administration building, control room building, and heavy equipment maintenance building restrooms.

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2. Effluent Limitations, Monitoring Frequencies, and Sample Types

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Weekly Avg	Measurement Frequency	Sample Type
Flow-mgd	---	Report	1/3 months	Estimate
BOD ₅	30 mg/L	45 mg/L	1/3 months	Grab
TSS	30 mg/L	45 mg/L	1/3 months	Grab
Fecal Coliform	200 col/100 mL	400 col/100 mL	1/3 months	Grab
pH	6.0 s.u.	9.0 s.u.	1/3 months	Grab

Flow - This LPDES permit establishes a reporting requirement for weekly average flow once per three months. This requirement is consistent with LAC 33:IX.2707.I.1.b. and with the Class II Sanitary Discharge General Permit, LAG540000.

BOD₅ - This LPDES permit establishes a monthly average limitation of 30 mg/L and a weekly average limitation of 45 mg/L for BOD₅ with sampling once per three months in accordance with the Class II Sanitary Discharge General Permit, LAG540000.

Total Suspended Solids - This LPDES permit establishes a monthly average limitation of 30 mg/L and a weekly average limitation of 45 mg/L for TSS with sampling once per three months in accordance with the Class II Sanitary Discharge General Permit, LAG540000.

Fecal Coliform - This LPDES permit establishes a monthly average limitation of 200 colonies/100 mL and a weekly average limitation of 400 colonies/100mL for Fecal Coliform with sampling once per three months in accordance with the Class II Sanitary Discharge General Permit, LAG540000.

pH - This LPDES permit establishes a minimum discharge limit of 6.0 standard units and a maximum discharge limit of 9.0 standard units for pH with sampling once per three months in accordance with the Class II Sanitary Discharge General Permit, LAG540000.

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Outfall 002

1. General Comments

The continuous discharge of cooling tower blowdown from the circular, induced draft cooling tower that services Unit 6.

2. Effluent Limitations, Monitoring Frequencies, and Sample Types

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow-mgd	Report	Report	1/week	Estimate
Temperature	---	97°F	1/day	Grab
Free Available Chlorine	0.2 mg/L (0.23 lbs/day)	0.5 mg/L (0.57 lbs/day)	1/week	Grab
Total Chromium	0.2 mg/L (2.74 lbs/day)	0.2 mg/L (2.74 lbs/day)	1/year	Grab
Total Zinc	1 mg/L (13.67 lbs/day)	1 mg/L (13.67 lbs/day)	1/quarter	Grab
pH	6.0 s.u.	9.0 s.u.	1/week	Grab

Flow - The flow requirements for reporting the monthly average flow and the daily maximum flow have been retained from the current LPDES permit. This requirement is consistent with LAC 33:IX.2707.I.1.b.

Temperature - The current LPDES permit established a temperature limitation of 97°F. This limitation is being retained with the same monitoring frequency of 1/day by grab sample.

Free Available Chlorine - The current LPDES permit established a monthly average of 0.2 mg/L and 0.5 mg/L in accordance with 40 CFR 423.13(d)(1). Pursuant to LAC 33:IX.2709.F, mass limitations were also established at a monthly average of 0.23 lbs/day and a daily maximum of 0.57 lbs/day. These limitations are being retained with the same monitoring frequency of 1/week by grab sample.

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Total Chromium - The current LPDES permit established a monthly average of 0.2 mg/L and a daily maximum of 0.2 mg/L in accordance with 40 CFR 423.13(d)(1) and (g). Pursuant to LAC 33:IX.2709.F, mass limitations were also established at a monthly average of 2.74 lbs/day and a daily maximum of 2.74 lbs/day. These limitations are being retained with the same monitoring frequency of once per year by grab sample.

Total Zinc - The current LPDES permit established a monthly average of 1.0 mg/L and a daily maximum of 1.0 mg/L in accordance with 40 CFR 423.13(d)(1) and (g). Pursuant to LAC 33:IX.2709.F, mass limitations were also established at a monthly average of 13.67 lbs/day and a daily maximum of 13.67 lbs/day. These limitations are being retained with the same monitoring frequency of once per quarter by month sample.

pH - The current LPDES permit established a minimum discharge limit of 6.0 standard units and a maximum discharge limit of 9.0 standard units for pH. These limits are based on 40 CFR 423.12(b)(1). These limitations are being retained with the same monitoring frequency of once per week by grab sample.

Biomonitoring Requirements - It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 002 are as follows:

TOXICITY TESTS

Chronic static renewal 48-hour
definitive toxicity test using
fathead minnow (*Pimephales promelas*)

FREQUENCY

once per quarter

Chronic static renewal 48-hour
definitive toxicity test using
Ceriodaphnia dubia

once per quarter

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The

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stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and salinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. However, the full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data shows actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 7%, 9%, 12%, 16%, and 21%. The biomonitoring critical dilution is defined as 16% effluent.

Outfall 003

1. General Comments

The continuous discharge of coal pile runoff, ash disposal area runoff, coal handling area runoff, cooling tower blowdown (intermittent), maintenance wastewater, low volume wastewaters (including but not limited to plant drains, bottom ash handling system wastewater, reverse osmosis reject water, demineralizer regeneration wastewater), previously monitored treated sanitary wastewater from Outfall 203, and previously monitored hydrostatic wastewater from Outfall 303.

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2. Effluent Limitations and Monitoring Frequencies

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow-mgd	Report	Report	Continuous	Recorder
TSS	Report	50 mg/L	1/week	Grab
TOC	---	50 mg/L	1/month	Grab
Oil & Grease	15 mg/L	20 mg/L	1/month	Grab
pH	6.0 s.u.	9.0 s.u.	1/week	Grab

Flow - The reporting requirement for monthly average and daily max flow is retained from the current LPDES permit. The flow is measured continuously with a sample type of recorder. This requirement is consistent with LAC 33:IX.2709.I.1.b.

Total Suspended Solids - The current LPDES permit established a monthly average reporting requirement for TSS and a daily maximum limit of 50 mg/L for TSS. These limitations are retained with the same monitoring frequency of once per week by grab sample.

Total Organic Carbon - The current LPDES permit established a daily maximum limit of 50 mg/L for TOC. This limitation is being retained with the same monitoring frequency of once per month by grab sample.

Oil and Grease - The current LPDES permit established a monthly average limitation of 15 mg/L and a daily maximum limitation of 20 mg/L. These limitations are retained with the same monitoring frequency of once per month by grab sample.

pH - The current LPDES permit established a minimum limit of 6.0 standard units and a maximum limit of 9.0 standard units for pH in accordance with 40 CFR 423.12(b)(1). These limitations are retained with the same monitoring frequency of once per week by grab sample.

Internal Outfalls

In accordance with LAC 33:IX.3305, the following is an explanation for the establishment of Internal Outfalls 203 and 303. Certain permit effluent limitations at the point of discharge are impractical because at the final discharge points the wastewater is diluted as to make monitoring impracticable. Therefore, in accordance with LAC 33:IX.2709, the internal outfalls described below will either remain or be included in the permit.

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Outfall 203

1. General Comments

The intermittent discharge of treated sanitary wastewater from the sewage treatment plant that services the fly ash maintenance building restroom

2. Effluent Limitations and Monitoring Frequencies

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Weekly Avg	Measurement Frequency	Sample Type
Flow-mgd	---	Report	1/6 months	Estimate
BOD ₅	---	45 mg/L	1/6 months	Grab
TSS	---	45 mg/L	1/6 months	Grab
Fecal Coliform	---	400 col/100 mL	1/6 months	Grab

Flow - The current LPDES permit established a reporting requirement for weekly average flow. This requirement is being retained with an increase in the monitoring frequency to be consistent with monitoring frequencies for sanitary discharges at other industrial facilities. This requirement is consistent with LAC 33:IX.2707.I.1.b.

BOD₅ - The current LPDES permit established a weekly average limit of 45 mg/L for BOD₅ in accordance with the Class I Sanitary Discharge General Permit, LAG530000. These limitations are retained with an increase in the monitoring frequency to be consistent with monitoring frequencies for sanitary discharges at other industrial facilities.

Total Suspended Solids - The current LPDES permit established a weekly average limit of 45 mg/L for Total Suspended Solids in accordance with the Class I Sanitary Discharge General Permit, LAG530000. These limitations are retained with an increase in the monitoring frequency to be consistent with monitoring frequencies for sanitary discharges at other industrial facilities.

Fecal Coliform - The current LPDES permit established a weekly average limit of 400 colonies/100mL for Fecal Coliform in accordance with the Class I Sanitary Discharge General Permit, LAG530000. These limitations are retained with an increase in the monitoring frequency to be consistent with monitoring frequencies for sanitary discharges at other industrial facilities.

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Outfall 303

1. General Comments

The intermittent discharge of hydrostatic test wastewater from hydrostatic tests conducted on various pipes, tanks, vessels, and/or equipment

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow-mgd	---	Report	1/discharge	Estimate
TSS	---	90 mg/L	1/discharge	Grab
Oil & Grease	---	15 mg/L	1/discharge	Grab
TOC	---	50 mg/L	1/discharge	Grab
Benzene**	---	50 µg/L	1/discharge	Grab
Total BTEX**	---	250 µg/L	1/discharge	Grab
Lead**	---	50 µg/L	1/discharge	Grab

**Sampling for Benzene, Total BTEX, and Total Lead is only required when discharging hydrostatic test waters from existing pipes, tanks, vessels, and/or equipment that have been used for the storage or transportation of liquid or gaseous petroleum hydrocarbons, i.e. diesel tanks or natural gas lines.

Flow - This LPDES permit establishes a reporting requirement for daily maximum flow once prior to discharge event. This requirement is consistent with LAC 33:IX.2707.I.1.b and the LPDES General Permit for Hydrostatic Test Wastewater, LAG670000.

TSS - This LPDES permit establishes a daily maximum limit of 90 mg/L in accordance with LPDES General Permit for Hydrostatic Test Wastewater, LAG670000. The monitoring frequency is set at once per discharge event by grab sample.

Oil & Grease - This LPDES permit establishes a daily maximum limit of 15 mg/L in accordance with LPDES General Permit for Hydrostatic Test Wastewater, LAG670000. The monitoring frequency is set at once per discharge event by grab sample.

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Total Organic Carbon - This LPDES permit establishes a daily maximum limit of 50 mg/L in accordance with LPDES General Permit for Hydrostatic Test Wastewater, LAG670000. The monitoring frequency is set at once per discharge event by grab sample.

Benzene, Total BTEX, and Lead - This LPDES permit establishes a daily maximum of 50 µg/L for Benzene, 250 µg/L for Total BTEX, and 50 µg/L for Lead in accordance with LPDES General Permit for Hydrostatic Test Wastewater, LAG670000. The monitoring frequencies are set at once per discharge event by grab sample.

Outfall 004

1. General Comments

The intermittent discharge of stormwater runoff from the Unit 6 turbine building area, force draft fan area, and bowl mill area, non process maintenance wastewaters (including but not limited to air conditioning condensate, fire protection system test water, and landscape water), and previously monitored hydrostatic wastewater from Outfall 303

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow-mgd	---	Report	1/quarter	Estimate
TOC	---	50 mg/L	1/quarter	Grab
Oil & Grease	---	15 mg/L	1/quarter	Grab
pH	6.0 s.u.	9.0 s.u.	1/quarter	Grab

Flow - This LPDES permit requires reporting of the daily maximum flow. The requirement is consistent with LAC 33:IX.2707.1.I.1.b. The monitoring frequency is once per quarter by estimate using best engineering judgement when discharging.

Total Organic Carbon - This LPDES permit establishes a daily maximum discharge limit of 50 mg/L. Total organic carbon is established to limit any organic compounds that could be discharged through this outfall. This limit is in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J.Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The monitoring frequency is set at once per quarter by grab sample.

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Oil and Grease -This LPDES permit establishes a daily maximum discharge limit of 15 mg/L. This limit is in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J.Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The monitoring frequency is set at once per quarter by grab sample.

pH - This LPDES permit establishes a minimum discharge limit of 6.0 standard units and a maximum discharge limit of 9.0 standard units. This limit is in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J.Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The monitoring frequency is set at once per quarter by grab sample.

Outfall 005

1. General Comments

The intermittent discharge of clarifier underflow

EFFLUENT CHARACTERISTIC	LIMITATION		MONITORING REQUIREMENTS	
	Monthly Avg	Daily Max	Measurement Frequency	Sample Type
Flow-mgd	Report	Report	1/month	Estimate

**Coagulants: The quantity and types of all coagulants (clarifying agents) used in the intake raw river water treatment clarification system during the sampling month shall be recorded. Records of the quantity and type of coagulants used shall be retained for three (3) years following Part III.C.3. No DMR reporting shall be required.

Flow - The flow requirements for reporting the monthly average and daily maximum flow with a monitoring frequency of once per month by estimate have been established based on similar discharges. This requirement is consistent with LAC 33:IX.2707.I.1.b.

Coagulants - The recording of coagulants have been included based on similar discharges.

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Part II Specific Conditions

PROHIBITION OF PCB DISCHARGES

As commanded by 40 CFR 423.12(b)(2), a Part II condition is proposed in this draft permit prohibiting the discharge of polychlorinated biphenyl compounds.

"There shall be no discharge of polychlorinated biphenyls (PCB's). The minimum quantification level for PCB's is 1.0 µg/l. If any individual analytical test result for PCB's is less than the minimum quantification level, then a value of zero (0) shall be used for the Discharge Monitoring Report (DMR) calculations and reporting requirements."

LOW VOLUME WASTE SOURCES

The term "low volume waste sources" means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established. Low volume waste sources include, but are not limited to: wastewaters from wet scrubber air pollution control systems, ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastewaters are not included.

FREE AVAILABLE CHLORINE

The term "free available chlorine" shall mean the value obtained using the amperometric titration method for free available chlorine described in the latest edition of Standard Methods for the Examination of Water and Wastewater.

Free available chlorine may not be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine at any one time.

TEMPERATURE

Daily temperature discharge is defined as the flow-weighted average (FWAT) and, on a daily basis, shall be monitored and recorded in accordance with Part I of this permit. FWAT shall be calculated at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\text{SUMMATION (INSTANTANEOUS FLOW X INSTANTANEOUS TEMPERATURE)}}{\text{SUMMATION (INSTANTANEOUS FLOW)}}$$

"Daily average temperature" (also known as average monthly or maximum 30 day value) shall be the arithmetic average of all FWATs calculated during the calendar month.

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"Daily maximum temperature" (also known as the maximum daily value) shall be the highest FWAT calculated during the calendar month.

PERMIT REOPENER CLAUSE

In accordance with LAC 33:IX.2903, this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit; or
3. Requires reassessment due to change in 303(d) status of waterbody; or
4. Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENT

In accordance with LAC 33:IX.2707.I.3 and 4, a Part II condition is proposed for applicability to all stormwater discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, that plan could be incorporated by reference into the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasure Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of storm water associated with industrial activity, as defined at LAC 33:IX.2511.B.14.

12. Compliance History/DMR Review:

A DMR review was completed for the period of January 1, 2005, through December 31, 2006. One excursion was noted for Outfall 103 monitoring period January 1 - December 31, 2005 with the Fecal Coliform result at 2,800 col/100 mL.

13. WATER QUALITY CONSIDERATIONS

Subsegment 030806 is listed on LDEQ's Final 2004 303(d) list as impaired for mercury for which the below TMDL has been developed. Subsegment 030806 was previously listed on LDEQ's Final 2004 303(d) list as impaired for organic enrichment/low DO for which the below TMDL have

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been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving waterbodies based on additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for Subsegment 030806.

Calcasieu Estuary TMDL for Dissolved Oxygen

The Roy S. Nelson power plant was identified in Appendix J of the TMDL as a point source discharge in the Calcasieu Estuary, specifically the Houston River. The facility was not given an allocation for oxygen demanding pollutants in the TMDL. However, BPJ based limits for TOC and BOD have been maintained from the previous permit and will provide control of oxygen demand from this facility.

Coastal Mercury TMDL

The Roy S. Nelson power plant was identified in Appendix C of the TMDL as a point source discharge included in the TMDL. However based on the facility type, SIC code, previous permits and the absence of reasonable potential to discharge Mercury, the facility was not given an allocation for Mercury in the TMDL. Based on the TMDL rationale and the analytical data submitted with the application, there is no reasonable potential for the discharge of Mercury from this facility. Effluent limitations will not be placed in the renewal permit.

14. ENDANGERED SPECIES

The receiving waterbody, Subsegment 030806 of the Calcasieu River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006, from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

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15. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

16. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

17. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List